

Remarks

1. Summary of the Office Action

In the office action mailed October 31, 2007, the Examiner rejected claims 1-7, 11-17, and 19-21 under 35 U.S.C. § 102 as being allegedly anticipated by U.S. Patent 6,231,516 (Keilman). The Examiner also rejected claims 8-10 and 23 under 35 U.S.C. § 103 as being allegedly unpatentable over Keilman.

2. Status of the Specification

Applicants have amended paragraph 0065 of the specification to rectify a typographical error. Paragraph 0065, with the desired correction identified, is presented on page 2 of this response.

3. Status of the Claims

Applicants have made no amendments to the claims, which are presented in their current form beginning on page 3 of this response. Currently pending are claims 1-17, 19-21, and 23, of which claims 1, 11, 14, 17, 19, 20, 21, and 23 are independent and the rest are dependent.

4. Response to Rejections

Response to Rejections Under 35 U.S.C. § 102:

The Examiner rejected claims 1-7, 11-17, and 19-21 under 35 U.S.C. § 102 as being allegedly anticipated by Keilman. To anticipate a claim, the cited reference must teach each and every element of the rejected claim. See MPEP § 2131. Applicants respectfully submit that Keilman fails to teach at least a neurostimulator wherein drive circuitry is configured to generate action

potential in neurons as set forth in independent claims 1, 11, 14. Applicants also submit that Keilman fail to teach at least a neurostimulator wherein the pressure wave generation means and the electrode means provide action potential in neurons as set forth in independent claim 17. Applicants also submit that Keilman fails to teach a method comprising directing pressure waves at a piezoelectric chip located proximate the excitable tissue as set for in independent claim 19. Further, Applicants submit that Keilman fails to teach either of the methods for preventing transmission of pain as set forth in independent claims 20 and 21. Consequently, Applicants submit that Keilman does not anticipate claims 1-7, 11-17, and 19-21.

The Examiner cited Keilman as disclosing transducer elements that produce acoustic waves downwardly. The Examiner also indicated that Keilman disclosed electrodes generated on a piezoelectric plastic substrate, leads used to drive transducer arrays, and a variety of electronic circuits. Applicants respectfully disagree with the Examiner's interpretation of Keilman, and the Examiner's conclusion that Keilman anticipates claims 1-7, 11-17, and 19-21.

Keilman describes several embodiments of an endoluminal implant. By Keilman's own terms, endoluminal implants are used in body passages such as a blood vessel, urethra, cervix, trachea, and esophagus which contain a lumen. See Keilman, col. 3, ln. 45-53. Keilman further defines endoluminal implants as stents, stent grafts, and other devices that are inserted into a lumen or body passage and moved into a location to provide a structural benefit to the lumen. See Keilman, col 5, ln. 63 – col. 6, ln. 5. A lumen is the inner open space or cavity of a tubular organ. See The American Heritage Stedman's Medical Dictionary, Houghton Mifflin Company, <http://dictionary.reference.com/browse/lumen> (accessed: January 23, 2008) see also Merriam-Webster's Medical Dictionary, Merriam-Webster, Inc. <http://dictionary.reference.com/browse/lumen> (accessed: Jan. 23, 2008). Despite the numerous physiological structures identified in Keilman,

Applicants note that Keilman does not mention the use of any implant with nerve cells or neurons as described in the pending application. Further, Applicants submit that nerves and neurons do not typically contain a lumen, and the device described in Keilman would thus be inappropriate for use with nerve cells and neurons.

Applicants also submit that Keilman Figure 13, as cited by the Examiner, teaches a transducer used with a stent. See Keilman, col. 19, ln. 44-47. Rather than describing a neurostimulator, Applicants submit that Figure 13 in Keilman teaches a measurement device designed to monitor the flow of fluid through a blood vessel or similar body lumen. See Keilman, col. 19, ln. 44 – col. 20, ln. 15.

Applicants respectfully submit that Keilman Figures 1-6, as cited by the Examiner, are inapposite to the claims in the pending application. Applicants submit that the circuits, as described by Keilman, provide power to transducers and transmit signals to receivers. See Keilman, col. 6, ln. 57 – col. 7, ln. 39. Notwithstanding the Examiner's assertion that Keilman's Figures 1-6 can be used as implantable electronic circuits, Applicants submit that Figures 1-6 each fail to teach any stimulus of a nerve cell or neuron as described in the pending application. Since Keilman fails to teach a device that generates action potentials of a neuron, interaction with excitable tissue, or impact on the transmission of pain signals, Applicants respectfully submit that Keilman does not anticipate independent claims 1, 11, 14, 17, 19, 20 or 21.

Further, Applicants submit that claims 2-7, claims 12-13, and claims 15-16, which depend from claims 1, 11, and 14, respectively, are allowable due to their dependencies. Consequently, Applicants submit, without conceding the Examiner's other statements, that claims 1-7, 11-17, and 19-21 are not anticipated by Keilman.

Response to Rejections Under 35 U.S.C. § 103:

The Examiner rejected claims 8-10 and claim 23 under 35 U.S.C. § 103 as being allegedly unpatentable over Keilman. To establish a *prima facie* case of obviousness, the cited art must teach or suggest all of the claim limitations. See MPEP § 2143. Applicants note that claims 8-10 ultimately depend from independent claim 1, which Applicants submit is allowable in light of the above remarks. Consequently, Applicants respectfully submit that claims 8-10 are allowable at least due to their dependencies.

Regarding claim 23, the Examiner indicated that a person of ordinary skill in the art would have found it obvious to implant the device disclosed in Keilman proximate to the pudental nerve. Applicants respectfully disagree with the Examiner's conclusion. As discussed above, Keilman fails to discuss nerves cells or neurons and similarly fails to teach the stimulation of any nerves. Consequently, Applicants submit that Keilman fails to teach the method of stimulating the pudental nerve described in claim 23.

Conclusion

Applicants respectfully submit that, in view of the remarks above, all of the pending rejections have been overcome. Applicants therefore respectfully request allowance of all the pending claims. The Examiner is invited to call the undersigned at (312) 913-2106 with any questions or comments.

Respectfully submitted,

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